

# SEQUENCE LISTING

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Liew, Choong-Chin

<120> Method for the Detection of Gene Transcripts in Blood and Uses  
Thereof

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<150> US

<151> 2000-01-04

<150> US 60/115,125

<151> 1999-01-06

<160> 112

<170> PatentIn version 3.2

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25 actcacgac caaactatga attttagatt cggatcaaac gaggattgat ccgagggacc 180  
aacgttgtga taaatcttac gtcgtcttat atattaagtt tttgtggagg atcggataag 240  
30 tctatagtgt ttgtcacaga tagtcccga ccacaccca gaccatagga gtcgctctcc 300  
ggaccgcggt ctaatggg 318  
35 <210> 12  
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40 <400> 12  
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45 caaataaaca aaaacttcca atctccattt aaaat 155

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 10 aaacaccttt ttggtgtcaa gaagaaaaag actagcttca ctgaacagag aaatgctgga 120  
  
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 gggtttcccg gggaacccaa cctttaagg ggtngggggg aatttcccc caaaaaaagg 120  
 25 gaaaaanttt tccggggggc ccaccggga agggntnccg gggaaggg 168

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 30 <212> DNA  
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 35 ggaacaaatt tgggataaaa atataaggct gggattacag gcatgagcca ccaagcccgg 120  
 cccacatttc cattttaat atatactgtg ctttacaat attataatat gttttaaat 180  
 40 atgttcacag aagcacctgg tctgtgaatg gcatgccagc attaaaaaa ataagcattc 240  
 tttgaatata tatttagttt ttaattgtg taggaaaatc aaagccagag ggagtagaaa 300  
 caaaatttgt gattttctaa atacttctg gctgcaggga agaaaccacg tcccaggcga 360  
 45 agtctacct aattgatga taaaattaca tggaagggat tctgttggc atgaggacct 420

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438

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 15 aaagggggaa ggcccccaa accggggggg gggnaaaaag gtgggtttcc cccttttcc 180  
 aattcccaa accaatttc aaaaggnaaa ccaacnttc ccaaatggg aaagg 235

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 ggggggnccaa accggnaaag gntttgggaa aaccaaattt ttttgncc caaccccccc 120  
 45 caaattgggg ggnaaaccaa atttaagggg ggaagggggg gncccccccg ggaaaggccc 180



aaggggggaa aatttttccg ggggtgggtn gggggaacca atttaagggg ggggccccg 240

gggggggtcc ccttgggcn ttttcttt tgggtnaaaa aaaaaaaccc ctg 294

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15

ctgtacttga actctaaaac tgttgagaa actcagtgt taccceaaca gattcatttc 180

aaatagctgt aaaaggtatg ttactccag aagaccagag ttgcttctt tgaacttctc 240

20

attccttggg cctaggaacc ctcatcacc tcacccaac gtcaaccag atcttctt 300

ccataaacag cactccctca ggcccctgcc tgacacaggc atagactgtc atgttgatt 360

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25

ctggggcttc ttggagccca acttctcat ggc 453

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 tttaggcggc accccaacaa caccaggccc tactttttcc aaggncgggg aagcccatgg 180  
 45 gttctgggna acgggcaatg cgggcttgca acgggnggaa naaaaacagn cccaaaagaa 240

tg

242

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 tctcagctca ctgcaacctc cacctctcag gagaattgct gaacctggga ggcggaggtt 120  
 15 gcaggagct gagattgcgc cactgccctc catcctgggc gacagagcaa gaacctgtct 180

c

181

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 cgggaaggcc nttggggaaa aaaccaangg ncaaaccccc ccaaccacnc ggcccccccc 120  
 15 aaggggggtg ggggaagacc aaatttcttt gggaaanaac gcccccttgg ggaaaanaag 180  
 gccaaccacc tttaacanc cccaangcg nggaagccat ttcttgg 227  
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 30 ggaagaattg tatgtgggag ttttaatgg tctcatttca ttggctataa ctcaattaca 180  
 aggagaaata taactgcaga ggagctttga aaatttagtt cagctgaggg taaaggaaga 240  
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 agatcgccta gccctttgcg ggcgaccacc acgatgtccc agcctgtcag gttgtcctga 120

40 ttgaggcgaa aggactcgcg gatttgacgc ttgatgcggt tgcgctcgac ggcgagcttg 180  
 acgctctttt tgccgatcac caaacctagg cggggatgat caagctgggt atcgcgcgct 240

45 agcagcagga cacttttgcc cgggagcttt accgcttggg gagtcgaaga ctgccttгна 300  
 ttgccgggga gtcagcagtc gctttttccc ggnegaagcc tcgaactcac cancetgtct 360

ggattaatta gacagcaaga cgcttgcggc ccctttggcg cgaacgaacn ncgaaaagga 420

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gccaaacccc cc 492

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acgagccggg ctggagcggt gggaaaagca aatgtaggca taagtaacga caatgcgggc 120

45 gagaaccccg cacaccgaaa ggctaaggat tcctccgcta tgtcaatcaa cggagggtta 180

gtcgggtact aaggcgttag cgaaggcgaa gcgccgatgt gaaggggggtt aatattcctc 240  
 cacttgccat gcgtgtgaat ccatgacgga gacgaagccg ggggtgcgtc ctgacggaag 300  
 5 tgggcgccag caggggcggc cttcgggccca aaccgaacct caggtcanac ttccaagaaa 360  
 agtgggtgaa acgccagcgc atggcaaccc gtaccgcaaa ccgacacagg tagccggggg 420  
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aagaaggaaac ccacctngg ggccaaacaa aaacttaaaa acccccccat ttentncccc 180  
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30 ggtgctcctg cgtttggact gtgcaggcct ctctatgct gatgcgtctc cccactcctg 180

agctaatttc tgcctgctc cttctgtgac atgtggcagc gtgggaaata gccactgtcc 240

35 cctgtccctg ctgttcttgg tgcacccag caccaggcca ctctgggagc cagggcagat 300

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5 actagatttt actgtagatg gtagataaaa gtccagtgaa aagcaaagat gtgtaatgtt 180

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 agggagactg gttttttaca gttgtctatg agagagatga cagttgcctg gattatgggtg 240  
 35 gtgacattgg agataagcag gtagacagat tctcagtgtg ttaggagaga aaaatcaata 300  
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 tgaaatgata gatgagataa aatgatgata tgaaatgatg agatgaatga tgagatgatg 180  
 15 agatgaatga tgaaatgaaa tgatgagatg agatgatgaa atgaaatggt gagatgaaat 240  
 gatgagatga aatgaaatag tgaaatgaaa ttgaaataaa atcgaaatga gagatgaaat 300  
 gatgagatga tgaaattgat gaaatgatga gatgtgatga gatgaaatga tgagatgaga 360  
 20 tgagatgaca tgaaataatg aatgaaatt gaaatgagat aagatacgag ctgagatgca 420  
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 25 g 481

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 15 ngacgcgccg tacaggntna attatggan cttacatggn aaaggggcan ctcaatgtcc 120  
 cacag 125  
  
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 35 aaatgaatct gagatgaaat gagatgaaaa ntgatacgaa aaatgatata aaaaatatga 180  
 cctgagatga aatgagatga aaaatgatac gaaaaatgat ataaaaata tgacatgaaa 240  
 40 tgaaatgaga tgatgatgaa tgacataatg aaatgatgaa ttgatgatat tgaaatgaaa 300  
 ttgaaagatg agatgaaatg atgagatgaa atgaaatgtt gaaatgatga agagatgtga 360  
 catgaaatga gctgaaatga gatgaaatga aatgagatta aatgatgaga tgaaaaatga 420  
 45 tgagatgaaa aatgagatga gatgatgaga tgagatgaga tgaattgaga tga 473

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 gaaatgagat gaaataaaat aatgaaatga tgaaataatg aaatgaaaat gagatggaaa 180  
 30 tgatgagatg agaagaaatg atgagatgaa atgatgaaat gatgagatga ganaaaatga 240  
 gatgaaatga tgagatgaga tgaaatatga tgagttgaaa tgacataatg aatgaaatga 300  
 35 tgaaatggaa taatgaaatg gaaatgatga gctgagatgc aatgagttga aatgagatga 360  
 aatgatgaaa tgatgagatg aaatgatgaa atgaaataat gaaatgagat gaaataaaat 420  
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cataaaatga gatgaaatga gatgtaatga tggaatgaga tgagatgaaa tgagatgaaa 180

20 tgatagatga gataaaatga tgatatgaaa tgatgagatg aatgatgaga tgatgagatg 240

aatgatgaaa tgaaatgatg agatgagatg atgaaatgaa atggtgagat gaaatgatg 299

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taaaatgatg aaatgatgag gtgatgagat gaaatgatga gatgaaatga tgagatgaga 120

35

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cgccatgaaa ttctgctcg attagcttac gttgtttgga tagaggccaa acaaggctgt 180

45 tatcggtacg aggaatggat gttcgatttc gtagaatagc cctgagagac ggccaatact 240

ctcacgagag gcagcaggcg cgtaaattac ccaattacaa caagtagagg tagcgaagga 300

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gtcattg 367

<210> 77

10 <211> 257

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atagaaatca ttatttctgt gggatggata attgggccaa attgtaaaat attttaacta 120

30 tcagtgtttg gggtttattt taaaagaat aggggtgccac cagatgttct ttagtggagg 180

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 30 tattacaaa atattggac cattantaaa gantagggcc aaccnaatt tttctgaaa 180  
 tttcgttaa atagccgtta aatgtttta cccattcat attggatacc ttaaattata 240  
 35 ataatggatt ttattgttaa attgtgtgtg tgtggtgtg atgccctgtc ttttcctc 300  
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 35 ccttgatggt caagtattta agaccctatg cnaatatattt ttaccttttc taataaacca 120  
  
 tgtttggt 128  
  
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ggccaggcct tcctttaa aaaaaatnac cgttttngg gggangnaac cttfaaaagg 120

ggaaaanaaa tccttttaa anggaantcc aagggaagga ncctgnncaa nacttcccn 180

30 ccaataaaaa aaacntttt ggaaangggg aaa 213

<210> 81

35 <211> 443  
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<400> 81

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tgatgaaatg agatgagatg agaagaaatg acttgatgag atgagataaa atgatgaaat 120

gaaatgaagt gaaatgaaat tgaaatgaga tgagatgaaa tgagataaaa tgatgagatg 180

15 aaatgagaag aaatgagatg aaatgatgaa atgatgagat gagatgaaaa atgatgggat 240

gagaaatgag atgaaatgat gggatgaaat gaaatgaaat aatgaaataa tgaaatgaaa 300

20 tgaattgata atattgaagt gaaattgaaa gatgagattg gatgaaatga tgagatgaaa 360

tgaaatgttg aaatgaaatg aagagatgta acatgaaatg agctgaaatg atgagatgaa 420

atgaaatgaa atgagattaa atg 443

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 25 gacctctgaa tgtattantg anncaagtga tagccaagat attttgaaga aaaatagata 120  
 ntagggacct gctctataag cccatcataa ttattatga agttataaca agtaaacag 180  
 taaggtattt ggcatggaat agagaaccca gaaacagacc caatgcatgg gtacaggata 240  
 30 taacacaggg aaatgagggg caatatatgg ttctgggata attatttata tggggaaaat 300  
 aaagaaattg gatccctacc tcacacatac aaaaaaaatc ataattgaat taaaaacttg 360  
 35 catgtgaaag gaaagacttt aaaacattta gaaaaagtat tggaggctat gatcttgggg 420  
 taggaaagca ttctttttt tt 442  
  
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<223> n is a, c, g, or t

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15 aggaaggaag gaagg 135

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aacttcctca gaaggacaag agacaaagaa gtgggggagg ccctcctatc catagctgag 180  
35 agggtttatt cttgtggtt ctgctgtcag agcctttgga tgtctgatct gagatggagc 240  
  
aaccacagct agacagaact tttagattt tgggggggtt aaaaggcctc aagcaaattc 300  
  
40 taaaactttc ttgaacccc ctggcatagg ctgagtttcc ctgact 346

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45 <212> DNA  
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<400> 85

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5 gaaaagaaaa tggtttttt tgccgaaatc aaccgggtaa 100

<210> 86

<211> 201

10 <212> DNA

<213> Human

<400> 86

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15 gaaaagagga agaaacgctt ttaggaggtt aaggattaaa gtaaaaatta tttgacata 120

attacctctt tttgtacca ctcttaaagg ccaggaacat atttgagaa gcctagtgt 180

20 atgtaacagt gtgggggttc a 201

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25 <212> DNA

<213> Human

<400> 87

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tcctttacc cggcactcgg gtccaccctc gcggcaccag aggtattctc cggcgagtcg 180

35 ttaaccatcg caatcgccga ccgagtttaa ggaccactcc ccaccttct cattagttaa 240

ggagaacgct actttacccc atagacggag aaatcgctac tcaactacca ggcgcgcgcc 300

gtcgagtccc tcttcctctc tttatgcatt tagagcgctt tcgtaagagt tttccctaga 360

40 ttcttctaag cgtagcgcgt ctactccaat gttttcgta atccagccc aactaacgcc 420

gcggaggagt cgtaccgtct actctatcc cgtcggctcg gatttactac aggagctaag 480

45 aaaacaaaa gtaccagccc taaaggaaag tcaaaggacg cccgtaaaaa a 531

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 5 <213> Human  
  
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 10 cattcgggtcc agtgcctcgc cctattagcc cttagccca ccgtttctaa aactcccaga 120  
 acagccaaac cgggtccgccc aaggcctccg tcgttttata atatattccg ttacgtata 180  
 aggaacgaac ccccttcat taccacgggc ccgcgtccgc ctcttctcc attcgcaaca 240  
 15 gttctattcc ttacagctc ccgtacctgc ttccagaaca tcgcaccgcc atagtcgaaa 300  
 gatagcaaag attaccagc ttctattcct cgccccagag ccgagtaaatt cgaagtttat 360  
 20 agaggcggaa tccaaccatt caagagttat aacaagttat cggcactcgg gggatcagaa 420  
 tataaactta atgtccctt tattctcccg gacgccctt ttaaccatt ctctctatct 480  
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<222> (668)..(668)  
<223> n is a, c, g, or t

30 <220>  
<221> misc\_feature  
<222> (694)..(694)  
<223> n is a, c, g, or t

35 <220>  
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<222> (709)..(710)  
<223> n is a, c, g, or t

40 <220>  
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<222> (735)..(735)  
<223> n is a, c, g, or t

45 <220>  
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<222> (751)..(752)  
<223> n is a, c, g, or t

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5 <221> misc\_feature  
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<223> n is a, c, g, or t

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10 <221> misc\_feature  
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<223> n is a, c, g, or t

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15 <221> misc\_feature  
<222> (782)..(782)  
<223> n is a, c, g, or t

<220>

20 <221> misc\_feature  
<222> (786)..(786)  
<223> n is a, c, g, or t

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25 <221> misc\_feature  
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<223> n is a, c, g, or t

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30 <221> misc\_feature  
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<223> n is a, c, g, or t

<400> 96

35 gagatgaatg atgaaatgat gagatgagat gatgaaatga aatggtgaga tgaactgatg 60

aaatgaaatg aaataatgaa atgaaattga aataaaattg aaatgagatg agatgaaatg 120

atgagatgat gaaataaaat gatgaaatga gatgtgatga gatgaaatga ngagatgaaa 180

40 tgatgagatg agatgacatg aaataaatga aataatgaaa tcgaaatgag atgagaagat 240

acgagatgag atgaaatgat gagatgaaat gatgaaatga gataagatga aaagagttga 300

45 tgagatgatg agatgaaatg agatgaaaag agatgaaatg agatgaaatg aaatgatgag 360

atgaaatgag gtgaaatgaa attagatgaa acgtaatgag atgaaatgac ataataaat 420  
gaaaaaatga aatgaaataa tgaaatgagg tgaaattaaa tgagatgatg aaattaaatg 480  
5 atgaaatgaa ataataaat ggaaatgaaa tggaaatgat gagatgaatg atgagatgaa 540  
atgatgagat gagatgtatt gatgagagga aatgatgaga tgtaatgaaa tgagatgaaa 600  
tgaatgagat gaaatggaat antggaangg aaattgattg gngatttgag atgaaatgag 660  
10 ntaaatgnga tgaattaatg atgagatgaa atgntgaatg ccgggggtggn tgagatgaat 720  
tgagttgaac cctgngatga atgaagattg nntgaatggt ggntgaatgt tgaatggntg 780  
15 gntggnanaa tgcctgtngg 800

<210> 97  
<211> 334  
20 <212> DNA  
<213> Human

<400> 97  
gatgaattga aatgaaatga aataatgaaa taatgaaatg agatgaaatg aaaagaaatg 60  
25 atgaaatgat attgaaatga aattgaaaga tgagatgatg agatgaaatg gtgaaatgtt 120  
gaaatgaaat gatgaaatga atagatgtga catgaaatga gctgaaatga tgagatcaaa 180  
30 tgaaatgaaa tgagattaaa tgatgagatg aaaactgatg aaaacttaaa tgatgaaata 240  
atgaaatgaa aatgaaatgg aatgatgag atgagaagaa atgatgagat gagatgagat 300  
aaaatgagat gaaatgatga gatgaaatga tgag 334  
35

<210> 98  
<211> 100  
<212> DNA  
40 <213> Human

<220>  
<221> misc\_feature  
45 <222> (17)..(17)  
<223> n is a, c, g, or t

<400> 98  
 ttcaggccgt ctgcttntac atatactatc gagaatgggtg ctgtgcactc ataacaccgt 60  
 5 tgcttggttag acgcttttga acccttcagc gctgaaagta 100  
 <210> 99  
 <211> 500  
 10 <212> DNA  
 <213> Human  
 <220>  
 15 <221> misc\_feature  
 <222> (8)..(8)  
 <223> n is a, c, g, or t  
 <220>  
 20 <221> misc\_feature  
 <222> (361)..(361)  
 <223> n is a, c, g, or t  
 <400> 99  
 25 cccggganntt cggcccttat ggcccgggga aatgatgaga tgaaatgatg aaatgagata 60  
 agatgaaaag agttgatgag atgatgagat gaaatgagat gaaaagagat gaaatgagat 120  
 gaaatgaaat gatgagatga aatgaggtga aatgaaatta gatgaaacgt aatgagatga 180  
 30 aatgacctaa tgaaatgaaa aaatgaaatg aaataatgaa atgaggtgaa attaaatgag 240  
 atgatgaaat taaatgatga aatgaaataa tgaaatggaa atgaaatgga aatgatgaga 300  
 35 tgaatgatga gatgaaatga tgagatgaga tctaataatg agaggagatg atgagatgaa 360  
 ntgagatgaa aagagatgaa atgagatgaa accgaaatga tgagatgaaa tgaggtgaaa 420  
 tgaaattaga tgaaacgtaa tgagatgaaa tgacataatg aaatgaaaaa atgaaatgaa 480  
 40 ataatgaaat gaggtgaaat 500  
 <210> 100  
 45 <211> 397  
 <212> DNA

<213> Human

<220>

5 <221> misc\_feature  
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<223> n is a, c, g, or t

<220>

10 <221> misc\_feature  
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<223> n is a, c, g, or t

<220>

15 <221> misc\_feature  
<222> (50)..(50)  
<223> n is a, c, g, or t

<220>

20 <221> misc\_feature  
<222> (56)..(56)  
<223> n is a, c, g, or t

<220>

25 <221> misc\_feature  
<222> (71)..(72)  
<223> n is a, c, g, or t

<220>

30 <221> misc\_feature  
<222> (97)..(97)  
<223> n is a, c, g, or t

<220>

35 <221> misc\_feature  
<222> (110)..(110)  
<223> n is a, c, g, or t

<220>

40 <221> misc\_feature  
<222> (177)..(177)  
<223> n is a, c, g, or t

<400> 100

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tccccttgaa nntctctaaa ccttaacttt ctggccnttt tgttcagan atgcctaacc 120

ctcaggggggt cttttgttct ctacgcctaa aaacttaalc tgtttggaac aattccnttt 180

5 cctctctgta gaaattgacc tggccatggc tcctgtgaat gatacggttg ctattatccc 240

tgaacactgt aaaaatgaac ttgaaacag ttgggtagga cccaaacaga aaatgatgta 300

tggcttgga atagtttagc tgaacattat gctttaatat ttactggcc atgcagcac 360

10 aggtttagaa atttatgttc ggctttttaa agtttta 397

<210> 101

15 <211> 132

<212> DNA

<213> Human

<220>

20 <221> misc\_feature

<222> (121)..(121)

<223> n is a, c, g, or t

25 <400> 101

gttaccta atgtttactct cattttcttt ttctttattt ttcatgtgta aaataggaac 60

attaattgta ctactttcaa aagaattaat tgaagaaaga gagatacagg gtatctaggc 120

30 ngaggaagac cc 132

<210> 102

<211> 246

35 <212> DNA

<213> Human

<400> 102

ggggggcttta gttataactg ggctaagcat aattgcgcta ccaattccat attatctcat 60

40 ggcactta atttataattg atatataata taaaaaattc aatgcagata ttgatataat 120

aaaaatagat aatggtaalc caagcacgat ggtagccatc actctaattg ctttgggggtt 180

45 aacctataac ttattaagta aagtgccaga atggttcttt gacagtatta aaattaaaga 240





analysis

 $\langle 220 \rangle$ 

5 <221> primer bind

 $\langle 222 \rangle \quad (1) \dots (24)$ 

<400> 105

gctggaacgt agagactccc tgct

24

<210> 106

<211> 24

## <212> DNA

15 <213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> reverse primer of  $\beta$ MyHC gene used for quantitative RT-PCR analysis

 $\langle 220 \rangle$ 

<221> primer bind

$$\langle 222 \rangle \quad (1) \dots (2\bar{4})$$

<400> 106

ggatccttc agatcatcca cttg

24

<210> 107

<211> 20

## <212> DNA

### <213> Artificial Sequence

 $\langle 220 \rangle$ 

<223> forward primer of ANF used for quantitative RT-PCR analysis

**<220>**

<221> primer\_bind

 $\langle 222 \rangle$  (1)..(20)

<400> 107

ggattcaag aatttgctgg

20

<210> 108  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

5

<220>  
 <223> reverse primer of ANF used for quantitative RT-PCR analysis

10 <220>  
 <221> primer\_bind  
 <222> (1)..(20)

<400> 108  
 15 gcagatcgat cagaggagtc 20

<210> 109  
 <211> 20  
 20 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> forward primer of APP used for quantitative RT-PCR analysis  
 25

<220>  
 <221> primer\_bind  
 <222> (1)..(20)  
 30 <400> 109  
 ggatgcttca tgtgaacgtg 20

35 <210> 110  
 <211> 19  
 <212> DNA  
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40 <220>  
 <223> reverse primer of APP used for quantitative RT-PCR analysis

<220>  
 45 <221> primer\_bind  
 <222> (1)..(19)

<400> 110  
tcattcacac cagcacatg

19

5

<210> 111  
<211> 21  
<212> DNA  
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10

<220>  
<223> forward primer of ZFP used for quantitative RT-PCR analysis

15

<220>  
<221> primer\_bind  
<222> (1)..(21)

<400> 111

20 cacargagrc arggtcaacg a

21

<210> 112

<211> 22

25

<212> DNA  
<213> Artificial Sequence

<220>

<223> reverse primer of ZFP used for quantitative RT-PCR analysis

30

<220>

<221> primer\_bind

<222> (1)..(22)

35

<400> 112

ggattaaaat gaagcaccca ga

22